

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) Received at London Office 6 OCT 1939

Date of writing Report 27/9 1939 When handed in at Local Office Port of Copenhagen

No. in Survey held at Odense Date, First Survey 13/6 Last Survey 15/9 1939 (Number of Visits 15)

33954 on the Twin S. Motor ship "SOMMELSDYK" Tons Gross 7227.14 Net 5517.53

Built at Odense By whom built Odense Haalskibs vaff Yard No. 79 When built 1939

Owners: Fedt. Aunke Hoornv. Haab. Port belonging to Rotterdam

Electrical Installation fitted by Dansk Elektriske Kompagni Contract No. When fitted 1939

Is vessel fitted for carrying Petroleum in bulk No Is vessel equipped with D.F. yes E.S.D. yes Gy.C. No Sub.Sig. No

Have plans been submitted and approved yes System of Distribution 2 wire direct current Voltage of supply for Lighting 220

Heating 220 Power 220 Direct or Alternating Current, Lighting direct Power direct If Alternating Current state frequency Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off yes Are turbine emergency governors fitted with a

trip switch as per Rule Generators, are they compound wound yes, are they level compounded under working conditions yes

if not compound wound state distance between generators and from switchboard Where more than one generator is fitted are they

arranged to run in parallel yes, are shunt field regulators provided yes Is the compound winding connected to the negative or positive pole

positive Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing yes Have certificates of

test for machines under 100 kw. been supplied yes and the results found as per rule yes Are the lubricating arrangements and the construction

of the generators as per rule yes Position of Generators on port side 2 on starboard side of engine room

is the ventilation in way of generators satisfactory yes are they clear of inflammable material yes, if situated

near unprotected combustible material state distance from same horizontally and vertically, are the generators protected from mechanical

injury and damage from water, steam and oil yes, are the bedplates and frames earthed yes and the prime movers and generators in metallic

contact yes Switchboards, where are main switchboards placed on platform deck in the engine room

are they in accessible positions, free from inflammable gases and acid fumes yes, are they protected from mechanical injury and damage from water, steam

and oil yes, if situated near unprotected combustible material state distance from same horizontally and vertically, what insulation

material is used for the panels "Gindango", if of synthetic insulating material is it an Approved Type yes, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule Is the frame effectually earthed yes

Is the construction as per Rule yes, including accessibility of parts yes, absence of fuses on the back of the board yes, individual fuses

to pilot and earth lamps, voltmeters, etc. yes locking of screws and nuts yes, labelling of apparatus and fuses yes, fuses on the "dead"

side of switches yes Description of Main Switchgear for each generator and arrangement of equaliser switches a 266 pole cir-

cuit breaker with overload & reverse current trip and equalizer

switch as per Sect. 3 clause 3 A (f) ✓

and for each outgoing circuit a 266 pole circuit breaker with a fuse on each

pole or with overload current trip

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 6

ammeters 4 voltmeters synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection yes Earth Testing, state means provided 1 Ohmmeter & 1 set of earth lamps



Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an approved type yes, are all fuses labelled as per Rule yes, are the reversed current protection devices connected on the pole opposite to the equaliser connection yes, have they been tested under working conditions yes. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule yes. Cables, are they insulated and protected as per the appropriate Tables of the Rules yes, if otherwise than as per Rule are they of an approved type no.

state maximum fall of pressure between bus bars and any point under maximum load 3.5 lb, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets yes. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends no with insulating compound no or waterproof insulating tape no. Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage yes, are cables laid under machines or floorplates no, if so, are they adequately protected no. Are cables in machinery spaces, galleys, laundries, etc., lead covered yes or run in conduit no. State how the cables are supported and protected The cables are lead covered and braided with steel wire and cotton, supported by steel clips; in holds protected by steel plate casing

Are all lead sheaths, armouring and conduits effectually bonded and earthed yes. Refrigerated chambers, are the cables and fittings as per Rule yes. Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes, where unarmoured cables pass through beams, etc., are the holes effectively bushed yes and with what material lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes. Emergency Supply, state position generator placed in the deck house amidships and method of control switch board for emergency light near generator, switch over to main switch board. Navigation Lamps, are they separately wired yes controlled by separate double pole switches yes and fuses yes. Are the switches and fuses in a position accessible only to the officers on watch yes, is an automatic indicator fitted yes. Secondary Batteries, are they constructed and fitted as per Rule no, are they adequately ventilated no.

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof yes. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present no, if so, how are they protected no. and where are the controlling switches fitted no, are all fittings suitably ventilated yes.

are all fittings and accessories constructed and installed as per Rule yes. Searchlight Lamps, No. of no, whether fixed or portable no, are their fittings as per Rule no. Heating and Cooking, is the general construction as per Rule yes, are the frames effectually earthed yes, are heaters in the accommodation of the convection type yes. Motors, are all motors constructed and installed as per Rule yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil yes, if situated near unprotected combustible material state minimum distance from same horizontally no and vertically no.

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing None. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule yes. Control Gear and Resistances, are they constructed and fitted as per Rule yes. Lightning Conductors, where required are they fitted as per Rule no. Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with no, are all fuses of the cartridge type no, are they of an approved type no. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type no. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule yes, are they suitably stored in dry situations yes. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory yes.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	3	240	220	1090	400	3 6 cyl 25 c/s A oil engines	heavy oil	150° F
EMERGENCY ...	1	25	220	114	1000	1 3 cyl 45 c/s A oil engine	- " -	> 150° F
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return loss).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Cable.	Sectional Area or No. and Size of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	240	3	400	1090	1185	43	RUBBER	lead covered
" " EQUALISER	240	2	310	1090	645	25.40	"	steel wire and cotton braided
" " "	240	3	400	1090	1185	50	"	"
" " "	240	3	400	1090	1185	80	"	"
EMERGENCY GENERATOR ...	25	1	70	114	123	10	"	"
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS ...	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return loss).	INSULATED WITH.	HOW PROTECTED.
Z MOTOR ROOM	1	50	44	98	8.8	"
Y SWITCHBOARD FOR LIGHT	1	150	129	205	8.6	"
X EMERGENCY SWITCHBOARD	1	70	30	123	46	"
T REFRIGERATING PLANT	2	150	335	410	67.4	"
V FANS REFRIGER CHAMBERS	1	4	16	22	72	"
U LIGHT BRIDGE	1	95	61	147	74	"
S " " "	1	16	23	48	83	"
R " " AFT	1	6	16	28	136	"
Q " " DECK HOUSE L-1	1	6	18	28	58	"
P " " " " " " " " " "	1	6	18	28	77	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS ...	1	16	10	48	90	"
E NAVIGATION LIGHTS ...	1	2.5	5	15	102	"
LIGHTING AND HEATING ...						
A HEATERS IN ACCOMMODATIONS	1	50	63	98	78	"
B " " " "	1	70	51	123	62	"
C " " " "	1	75	123	147	56	"
D " " " "	1	50	77	98	136	"
B FUEL OIL HEATERS	1	150	245	280	77	"
Q GALLEY	1	120	103	177	82	"
D LUBRICATING OIL PREHEATERS	1	120	136	177	90	"
E STREAMLINE FILTERS	1	155	215	232	94	"
R WATER HEATERS	1	400	309	395	81	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return loss).	INSULATED WITH.	HOW PROTECTED.
JANITARY PUMP	2	13/18	1	25	60	63	33/17	"
COOLING WATER PUMPS	3	50	1	150	165	205	37/51	"
LUBRICAT. OIL " "	3	66	1	185	220	232	107/11	"
COOLING WATER PUMP FOR AUX. ENGL.	1	9	1	10	30	38	66	"
LEAN BALLAST PUMP	1	15/21	1	35	70	77	44	"
BALLAST PUMP	1	15/21	1	35	70	77	34	"
BILGE PUMP	1	15/21	1	35	70	77	29	"
PALM OIL PUMP	1	16	1	25	120	147	28	"
OIL FUEL TRANSF. PUMP	1	13	1	13	13	13	13	"
G " " " " " " " " " "	1	2	1	50	85	115	10	"
JANITARY PUMPS	2	1	1	1	1	1	1	"
A. HOT AIR VENTILATOR E.R.	3	0.55	1	10	6.5	38	10	"
COMPRESSOR FOR D.B.L.R.	1	5	1	1	1	1	1	"
S FAN " " " " " " " " " "	1	1.35	1	10	23	38	68	"
FUEL OIL TRANSF. PUMP	1	0.5	1	1	1	1	1	"
MANEUVERING AIR COMP.	2	60	1	185	200	232	43/48	"
F. VENTILATORS ENG. ROOM	4	6	1	35	80	77	39	"
C. OIL PURIFIERS	5	2.5	1	35	45	77	88	"
H. WORKSHOP	3	2.5	1	6	22	28	10	"
I TURN GEARS & HOLDVENTS.	24	3.0-7	1	120	100	177	10	"
STEERING GEAR	1	60	1	150	200	205	50	"
WINDLASS	1	75	1	185	250	335	190	"
J WINCHES FORE	2	28	1	75	185	195	168	"
K " " "	4	35	2	150	470	560	162	"
L " " "	4	35	2	150	470	560	136	"
M " " "	2	28	1	75	185	195	136	"
N " " AFT	2	28	1	75	185	195	80	"
O " " "	4	35	2	150	470	560	160	"
P " " "	4	35	2	150	470	560	116	"
X " " "	2	35	1	120	235	235	110	"
LIFE BOAT HOIST	1	13	1	25	48	63	76	"

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The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.

The foregoing is a correct description.

*Eduse*

Electrical Engineers.

Date *2-10-1939*

**DEC**

DANSK ELEKTRISITETS-KOMPAGNI

*Eduse*

COMPASSES.

Minimum distance between electric generators or motors and standard compass *20 m*

Minimum distance between electric generators or motors and steering compass *19 m*

The nearest cables to the compasses are as follows:—

A cable carrying *4.5* Ampères *3* feet from standard compass *4* feet from steering compass.

A cable carrying *0.25* Ampères *1* feet from standard compass *1* feet from steering compass.

A cable carrying *0.1* Ampères *8"* feet from standard compass *8"* feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power *yes*

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted *yes*

The maximum deviation due to electric currents was found to be *0* degrees on *any* course in the case of the standard compass, and *0* degrees on *any* course in the case of the steering compass.

Builder's Signature.

Date

**ODENSE STAALSKIBSVÆRFT**

**VED A. P. ROLLER**

*E. J. Rungsted*

Is this installation a duplicate of a previous case *No* If so, state name of vessel

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

*The electric light, power and heating installation herein described has been fitted in accordance with the Society's Rules, the approved plans (with some amendments) and the Secretary's letter E dated 16/1/39.*

*The workmanship is of good description throughout and on completion the whole installation was tested as per Rules and found satisfactory.*

*Roller*  
*11/10/39*

Total Capacity of Generators *745* Kilowatts.

The amount of Fee ... *£ 1425.20* When applied for, *3.10.39*

Travelling Expenses (if any) £ : : When received, *13.10.39 RBA*

*Christoffers*

Surveyor to Lloyd's Register of Shipping.

TUE 17 OCT 1939

Committee's Minute

Assigned *See Gen. J.C. 11015*

2m, 10, 38.—Transfer. (MADE IN ENGLAND.)  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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